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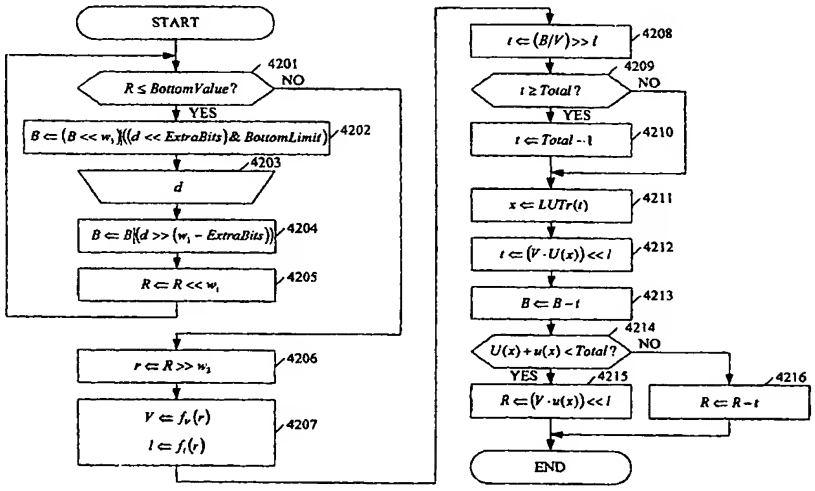
(54) Title: FAST CODEC WITH HIGH COMPRESSION RATIO AND MINIMUM REQUIRED RESOURCES



(57) Abstract: This invention provides a novel single-pass and multi-pass synchronized encoder and decoder, performing order(s) of magnitude faster data compression and decompression, at any compression ratio with the higher or the same perceived and measured decompressed image quality in comparison with the best state-of-the-art compression methods, using order(s) of magnitude less system resources (processor complexity, memory size, consumed power, bus bandwith, data latency). These features are achieved using novel direct and inverse non-stationary filters for the recusive octave direct and inverse subband transformation, novel simple context modeling and symbol probability estimation using a minimum number of histograms with the fast adaptation for the sign and the magnitude of the transformation coefficients, a novel accelerated range coder without division operations, and a novel synchronisation of the compressed data.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04N7/26

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 442 298 B1 (NIXON STUART WILLIAM) 27 August 2002 (2002-08-27) column 7, line 38 -column 9, line 67; figure 3 column 15, line 38-67 -/--	1-9,11, 56-64, 66, 113-121, 123, 168-176, 178, 225-233, 235, 280-288, 290, 337-345, 347, 392-400, 402, 449-452

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
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Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Hardell, A

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CHRYSAFIS C ET AL: "An algorithm for low memory wavelet image compression" IMAGE PROCESSING, 1999. ICIP 99. PROCEEDINGS. 1999 INTERNATIONAL CONFERENCE ON KOBE, JAPAN 24-28 OCT. 1999, PISCATAWAY, NJ, USA,IEEE, US, 24 October 1999 (1999-10-24), pages 354-358, XP010368832 ISBN: 0-7803-5467-2 cited in the application page 355, right-hand column, line 7-15 ---	1,56, 113,168, 225,280, 337,392, 449-452
A	COSMAN P ET AL: "MEMORY CONSTRAINED WAVELET BASED IMAGE CODING" IEEE SIGNAL PROCESSING LETTERS, IEEE SIGNAL PROCESSING SOCIETY, US, vol. 5, no. 9, 1 September 1998 (1998-09-01), pages 221-223, XP000782042 ISSN: 1070-9908 abstract ---	9,64, 121,176, 233,288, 345,400
A	US 5 926 791 A (OGATA MASAMI ET AL) 20 July 1999 (1999-07-20) figures 2-5 -----	1,56, 113,168, 225,280, 337,392, 449-452

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
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		AU 3980799 A	29-05-2000
		WO 0028476 A1	18-05-2000
US 5926791 A	20-07-1999	JP 9181612 A	11-07-1997